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Flying Operations

F/QF-4--AIRCREW EVALUATION CRITERIA

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This volume implements AFD 11-2, *Aircraft Rules and Procedures*; AFD 11-4, *Aviation Service*; and AFI 11-202V2, *Aircrew Standardization/Evaluation Program*. It applies to all F/QF-4 units. This instruction does not apply to the Air National Guard (ANG) or the Air Force Reserve Command (AFRC). MAJCOMs/DRUs/FOAs are to forward proposed MAJCOM/DRU/FOA-level supplements to this volume to HQ USAF/XOOT, through HQ ACC/DOTV, for approval prior to publication IAW AFD 11-2. Copies of MAJCOM/DRU/FOA-level supplements, after approved and published, will be provided by the issuing MAJCOM/DRU/FOA to HQ USAF/XOOT, HQ ACC/DOTV, and the user MAJCOM/DRU/FOA offices of primary responsibility. Field units below MAJCOM/DRU/FOA level will forward copies of their supplements to this publication to their parent MAJCOM/DRU/FOA office of primary responsibility for post publication review. **NOTE:** The terms Direct Reporting Unit (DRU) and Field Operating Agency (FOA) as used in this paragraph refer only to those DRUs/FOAs that report directly to HQ USAF. Keep supplements current by complying with AFI 33-160V1, *Publications Management Program*. See paragraph 1.2. of this volume for guidance on submitting comments and suggesting improvements to this publication.

The Privacy Act of 1974 applies to certain information gathered pursuant to this instruction. The Privacy Act System Number F011 AF XO A, Air Force Operations Resource Management Systems (AFORMS) covers required information. The authority for maintenance of the system is Title 37 U.S.C. 301a (Incentive Pay), Public Law 92-204, Section 715 (Appropriations Act for 1973), Public Laws 93-570 (Appropriations Act for 1974), 93-294 (Aviation Career Incentive Act of 1974), DoDD 7730.57 (Aviation Career Incentive Act of 1974 and Required Annual Report, February 5, 1976, with Changes 1 and 2), and Executive Order 9497.

The Paperwork Reduction Act of 1974 as amended in 1996 affects this instruction. Also, the Air Force Forms Management Program IAW AFI 37-160V8, *The Air Force Publications and Forms Management Program--Developing and Processing Forms*, affects this volume.

SUMMARY OF REVISIONS

This revision incorporates interim change (IC) 2000-1 and adds precision approach evaluation criteria for the QF-4. See the last attachment of this publication for the complete IC. A bar (|) indicates revision from the previous edition.

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Chapter 1

GENERAL INFORMATION

1.1. General. All evaluations will be conducted IAW the provisions of AFI 11-202V2, *Aircrew Standardization/Evaluation Program*, and this volume.

1.2. Recommended Changes/Waivers. Send comments and suggested improvements to this volume on an AF Form 847, **Recommendation for Change of Publication**, to HQ ACC/DOTV (205 Dodd Blvd, Suite 101, Langley AFB VA 23665-2789, email acc.dotvstrb@langley.af.mil). HQ USAF/XO is the approval authority for interim changes to this instruction. Waivers will be requested from HQ ACC/DOTV through Stan/Eval channels.

1.3. Procedures:

1.3.1. Flight Examiners (FEs) will use the evaluation criteria contained in this volume for conducting all flight and Emergency Procedures Evaluations. To ensure standard and objective evaluations, flight examiners will be thoroughly familiar with the prescribed evaluation criteria.

1.3.2. Recording devices (Video Tape Recorders [VTR], Air Combat Maneuvering Instrumentation [ACMI], etc.) should be used, when available, to reconstruct/evaluate the mission.

1.3.3. Unless specified, the examinee or FE may fly in any flight position/seat (to include chase) which will best enable the FE to conduct a thorough evaluation. QF-4 mission evaluations will normally be flown on a mobile control system (MCS) profile with the evaluator flying in the rear cockpit. At the discretion of the Operations Officer, the evaluator may fly in chase aircraft or positioned on the MCS van.

1.3.4. The FE will brief the examinee on the purpose of the evaluation and how it will be conducted prior to flight. The examinee will accomplish required flight planning in accordance with the flight position during the evaluation. Higher Headquarter (HHQ) FEs (and unit FEs as determined locally) will be furnished a copy of necessary mission data and mission materials.

1.3.5. Required areas are shown in [Table 2.1](#). When it is impossible to evaluate a required area in flight, it may be evaluated by an alternate method (i.e., in a simulator/cockpit procedure trainer (CPT) or by verbal examination) in order to complete the evaluation. The reason why required area(s) were not evaluated inflight and the alternate method of evaluation used will be documented in the Comments portion of the AF Form 8, **Certificate of Aircrew Qualification**.

1.3.6. The FE will thoroughly debrief all aspects of the flight. This debrief will include the examinee's overall rating, specific deviations, area grades assigned (if other than qualified) and any required additional training.

1.4. Grading Instructions. Standards and performance parameters are contained in AFI 11-202V2 and this instruction.

1.4.1. The FE will base tolerances for inflight parameters on conditions of smooth air and a stable aircraft. Do not consider momentary deviations from tolerances, provided the examinee applies prompt corrective action and such deviations do not jeopardize flying safety. The FE will consider cumulative deviations when determining the overall grade.

1.4.2. When grading criteria specify that airspeed and/or Angle of Attack (AOA) be evaluated and the flight manual lists only a minimum/maximum/recommended airspeed/AOA for that area, the examinee will brief the desired airspeed/AOA.

1.4.3. The FE will compare examinee performance for each area accomplished during the evaluation with the standards provided in this volume and assign an appropriate grade for the area. Derive the overall flight evaluation grade from the area grades based on a composite for the observed events and tasks IAW AFI 11-202V2 and this volume.

1.4.3.1. FEs will use the grading criteria in this volume to determine individual area grades. FE judgment must be exercised when the wording of areas is subjective and when specific situations are not covered.

1.4.3.2. FE judgment will be the determining factor in arriving at the overall grade.

1.4.3.3. General Criteria. The following general criteria apply during all phases of flight except as noted for specific events and instrument final approaches:

Table 1.1. General Criteria.

Q	Altitude +/- 200 feet
	Airspeed +/- 5%
	Course +/- 5 degrees/3 NM (whichever is greater)
	TACAN Arc +/- 2 NM
Q-	Altitude +/- 300 feet
	Airspeed +/- 10%
	Course +/- 10 degrees/5 NM (whichever is greater)
	TACAN Arc +/- 3 NM
U	Exceeded Q- limits

1.5. Emergency Procedures Evaluation (EPE). If available and configured appropriately, a flight simulator will be used to conduct the requisite EPE. If a simulator is not used, the EPE will be conducted in an Aircrew Training Device (ATD) or CPT. If a simulator, ATD or CPT is not used, the EPE will be given verbally. This evaluation will include areas commensurate with examinee's Ready Aircrew Program (RAP) training level.

1.5.1. The following items will be included on all emergency procedures evaluations:

1.5.1.1. Aircraft general knowledge.

1.5.1.2. Emergency procedures. Evaluate a minimum of two emergency procedures per phase of flight (i.e., pre-takeoff, takeoff, cruise and landing). All Bold Face will be evaluated.

1.5.1.3. Crew coordination (if applicable).

1.5.1.4. Unusual attitude recoveries. This also fulfills the Area 16 (Unusual Attitude Recoveries) requirement for Pilot Instrument/Qualification evaluations.

1.5.2. The following additional items will be included on EPEs as a requisite for the instrument and/or qualification evaluation:

1.5.2.1. AFMAN 11-217, *Instrument Flight Procedures*. Evaluate use of standby/emergency instruments.

1.5.2.2. Alternate/Divert Airfields. Evaluate a minimum of one approach at other than home base.

1.5.3. (F-4F) Mission evaluation scenarios should be tailored to unit tasking. The following additional items should be included in the emergency procedures evaluation given as a requisite to the mission evaluation.

1.5.3.1. Weapons system operation.

1.5.3.2. Electronic Attack (EA)/Electronic Protect (EP)/All Aspect Missile Defense (AAMD).

1.5.3.3. Evasive action.

1.5.3.4. Weapons Employment and Switchology.

1.5.4. The following grading criteria will be used to grade individual items on EPEs:

1.5.4.1. Q. Performance is correct. Quickly recognizes and corrects errors.

1.5.4.2. Q-. Performance is safe, but indicates limited proficiency. Makes errors of omission or commission.

1.5.4.3. U. Performance is unsafe or indicates lack of knowledge or ability.

1.6. (F-4F) Documentation of Weapons Employment Results. Weapons employment results will be documented in the Mission Description Section of the AF Form 8 for mission evaluations. Include entries for each type of simulated ordnance that was employed.

1.6.1. Air-to-Air. Record the number of simulated missile/gun-firing attempts and the number that were valid as in **Table 1.2**.

1.6.2. Air-to-Surface. Hit or Miss IAW GI 11-F4, *Aircrew Training* (will be converted to AFI 11-2F/QF-4, *F/QF-4 Aircrew Training*), will be entered for each air-to-surface record delivery. For air scored event or for VTR assessed deliveries, FEs will determine weapons employment results. Air scored or VTR assessed deliveries will be annotated with an asterisk. Document results using "Hit/Miss" as in **Table 1.2**.

Table 1.2. Weapons Employment Scores.

Weapons employment scores were:			
LALD	VLD	LAB	LAS
*Hit	Hit	Hit/Miss	Qualified
	ATTEMPTED	VALID	
AGM 9	2	1	
AIM 120	2	1	
*VTR assessed.			

1.6.3. FE Judgment. FE judgment will be the determining factor in deciding the weapons employment grade. If the examinee fails to qualify in any event(s), the FE may elect to award a higher area

grade than warranted by the score(s). The FE will include justification for such an award in the Additional Comments Section of the AF Form 8.

1.7. Records Disposition. Records will be disposed of IAW AFMAN 37-139, *Records Disposition Schedule*, Table 13-10.

Chapter 2

EVALUATION REQUIREMENTS

2.1. General:

2.1.1. All evaluations will follow the guidelines set in AFI 11-202V2 and this instruction. German Air Force (GAF) Mission and Qualification Evaluations will be recognized.

2.1.2. Evaluation requirements are depicted in [Table 2.1](#). Areas indicated with an "R" are required items for that evaluation. A required area is a specific area that must be evaluated to complete the evaluation. All required areas must be included in the flight evaluation profile. However, if it is impossible to accomplish a required area inflight, the FE may elect to evaluate the area(s) by an alternate method (i.e., simulator/Unit Training Devise, CPT, verbally, etc.), in order to complete the evaluation. If the FE determines the required item cannot be adequately evaluated by an alternate method, the examinee will require an additional flight to complete the evaluation.

2.1.3. Currency of Flight Publications. Publications that will be checked during the evaluation are:

2.1.3.1. (F-4F) T.O. 1F-4F-1CL-1

2.1.3.2. (F-4F) T.O. 1F-4F(LA)-34-1CL-1

2.1.3.3. (F-4F) T.O. 1F-4F(LV)-34-1CL-1

2.1.3.4. (QF-4) T.O. 1F-4(Q)E-1CL-1

2.1.3.5. Local Inflight Guide(s)

2.1.3.6. Units may specify additional publications to be evaluated in the unit supplement to AFI 11-202V2.

2.2. Pilot Instrument/Qualification Evaluation. A mission flown according to instrument flight rules (to the maximum extent practical) best fulfills the objective of the instrument/qualification evaluation. To the maximum extent possible, this evaluation will include approaches at airfields other than home or deployed locations. This evaluation may be administered on any compatible training mission with the approval of the unit commander. Minimum ground phase requisites are:

2.2.1. Instrument Refresher Course (IRC) Training (IAW AFMAN 11-210, *Instrument Refresher Course (IRC) Program*).

2.2.2. Instrument examination.

2.2.3. Closed and open book qualification examinations.

2.2.4. EPE.

2.2.5. Bold Face Written Exam. Answers must contain all Bold Face items in proper sequence.

2.3. WSO Qualification Evaluation. This evaluation is normally combined with WSO mission evaluation for basic mission capable (BMC)/combat mission ready (CMR) WSOs. A separate qualification evaluation will normally be administrated to basic aircraft qualification (BAQ) WSOs who do not maintain qualification in the unit's tactical mission and WSOs going through initial qualification. This evaluation

may be administered on any compatible training mission with the approval of the unit Chief of Stan/Eval and the commander's concurrence. Minimum ground phase requisites are:

- 2.3.1. Closed and open book qualification examinations.
- 2.3.2. EPE.
- 2.3.3. Bold Face Written Exam. Answers must contain all Bold Face items in proper sequence.
- 2.3.4. IRC Training (IAW AFMAN 11-210).
- 2.3.5. Instrument examination.

2.4. Mission Evaluation. Profiles will be designed to evaluate the training/flight position/special qualifications as well as basic airmanship of the examinee. Initial mission evaluations will be given on any syllabus mission. Mission evaluations will normally be flown using unit formations and tactics. Examinees will be evaluated in the position of their highest qualification. If briefed, at the FE's discretion, portions may be flown in another position, but the emphasis is to have examinees evaluated at their highest qualification level. Based on the examinee's experience level, a wingman may be required to brief (to include tactics) and/or lead certain phases of the mission, but will not be evaluated using flight lead grading criteria. Evaluations during exercises or deployments are encouraged.

NOTES:

- 1. Basic Mission Capable (BMC) aircrew will only be evaluated on those missions routinely performed. Examinees will only be evaluated on those areas for which they are qualified.
- 2. QF-4 Safety Pilots will be evaluated on an MCS mission profile. The FE will normally fly in the rear cockpit but may fly as chase or be positioned in the MCS van at the discretion of the Operations Officer.
- 2.4.1. Minimum ground phase requisites are:
 - 2.4.1.1. (F-4F) EPE.
 - 2.4.1.2. Bold Face Written Exam. Answers must contain all Bold Face items in proper sequence.
- 2.4.2. (F-4F) Air-to-Air. This evaluation will include tasks prescribed by the syllabus mission flown. When practical, adversaries should simulate enemy aircraft, tactics and ordnance. Dissimilar aircraft are preferred. When weather or other restrictions prohibit Dissimilar Air Combat (DACBT) or Low Altitude Training (LOWAT), multiple intercepts may be flown.
- 2.4.3. (F-4F) Air-to-Surface. First-look navigation and look-alike targets are encouraged. Mission profiles should be planned to include actual delivery of practice or live ordnance. Ordnance deliveries may be dry if they can be validated. In addition, dry passes are permitted if, in the FE's opinion:
 - 2.4.3.1. Accomplishing an actual delivery would significantly decrease the realism of the sortie.
 - 2.4.3.2. The mission profile allows a thorough evaluation of the examinee, but does not terminate on a range.

2.5. Formal Course Evaluation. Syllabus evaluations will be flown IAW syllabus mission profile guidelines if stated, or on a mission profile developed from syllabus training objectives. Formal course

guidelines may be modified, based on local operating considerations or FE judgment, to complete the evaluation. Training objectives and related areas will be graded using performance criteria in this volume.

2.6. Instructor Evaluation. Instructor evaluations will be conducted IAW AFI 11-202V2. Flight evaluations will include a thorough evaluation of the examinee's instructor knowledge and ability. This is a one-time check in which the examinee must demonstrate ability to instruct in some phase of the unit's mission. Except for requirements delineated in [Table 2.1.](#), specific profiles and/or events will be determined by the flight examiner. Subsequent evaluations (for example, Instrument/Qualification, Mission) will include instructor portions during the evaluations.

2.7. Formal Training Unit (FTU) Mission Evaluations. FTU instructor mission evaluation profiles will normally be IAW the formal course syllabus for any mission which the instructor is qualified to instruct.

2.8. Instructor Pilot Rear Cockpit Evaluations. When IPs are required to perform rear cockpit instructor duties, an evaluation of rear cockpit landings will be completed prior to performing rear cockpit instructor duties. These duties include instruction for and demonstration of landings during initial qualification training, requalification training, or additional training.

2.8.1. Examinees will complete the evaluation as follows:

2.8.1.1. All rear cockpit landing qualification evaluations will include satisfactory demonstration of: overhead and emergency patterns and a landing performed from the rear cockpit.

2.8.1.2. IPs will accomplish the rear cockpit landing qualification during either the instrument/qualification evaluation sortie, the mission evaluation sortie or during another sortie as a requisite. Each unit will specify when the rear cockpit landing qualification will be completed and identify procedures for completion of this requirement in the unit supplement to AFI 11-202V2.

2.8.2. When the rear cockpit landing qualification is evaluated during a separate sortie as a requisite for a flight evaluation, record "SPOT" in the Flight Phase block on the AF Form 8. Describe the purpose of the evaluation as "Rear Cockpit Landing Qualification" in the Mission Description section of the Comments block. In addition, FEs will document all discrepancies on the AF Form 8 in Section IV, paragraph b, under a subparagraph after the Emergency Procedures Evaluation (EPE) discrepancies as follows: "2. Rear Cockpit Landing Qualification." If no discrepancies are identified, enter "None" after the subparagraph title. A subparagraph 3 would then be used for flight discrepancies. If a reevaluation is required, an additional "SPOT" entry will be recorded in the Flight Phase block on the front of the AF Form 8. Additional training will be documented IAW AFI 11-202V2.

2.8.3. An initial rear cockpit landing qualification may be conducted independently of another evaluation. FEs will document completion of this Rear Cockpit Landing Qualification as a "SPOT" evaluation on an AF Form 8. Align the expiration date with the expiration date of the current evaluation during which the examinee would normally complete this requirement.

Table 2.1. Evaluation Requirements.

1 - PILOT INSTRUMENT/QUALIFICATION EVALUATION 2 - (F-4F) PILOT AIR-TO-SURFACE MISSION EVALUATION 3 - (F-4F) PILOT AIR-TO-AIR MISSION EVALUATION 4 - WSO QUALIFICATION EVALUATION (See note 5) 5 - WSO AIR-TO-SURFACE MISSION EVALUATION 6 - WSO AIR-TO-AIR MISSION EVALUATION 7 - (QF-4) PILOT MISSION EVALUATION									
AREA	NOTES	AREA TITLE	1	2	3	4	5	6	7
GENERAL									
1		PUBLICATIONS CHECK	R			R			
2		MISSION PLANNING	R	R	R	R	R	R	R
3		BRIEFING (if applicable)	R	R	R	R	R	R	R
4		PRE-TAKEOFF	R	R	R	R			R
5		TAKEOFF	R						
6		FORMATION TAKEOFF							
7		DEPARTURE	R						
8		LEVEL OFF	R						
9		CRUISE/NAVIGATION	R			R			
10		FORMATION							
11		IN-FLIGHT CHECKS	R	R	R	R	R	R	
12		FUEL MANAGEMENT	R	R	R				R
13		COMMUNICATION/IFF	R	R	R	R	R	R	R
14		CREW COORDINATION/CRM	R	R	R	R	R	R	R
15	1	AIRWORK/ADVANCED HANDLING/TACTICAL MANEUVER	R						
16	2	UNUSUAL ATTITUDE RECOVERIES	R						
17		WEAPONS SYSTEM/BIT CHECKS							
18		AIR REFUELING							
19		DESCENT	R						
20		GO-AROUND							
21		TRAIL RECOVERY							
22		EMERGENCY TRAFFIC PATTERNS	R						
23		EMERGENCY APPROACH/LANDING	R						
24		VFR PATTERN/APPROACH	R						
25		FORMATION APPROACH/LANDING							
26		LANDING	R						
27		AFTER LANDING	R			R			
28		FLIGHT LEADERSHIP (if applicable)	R	R	R				R

- 1 - PILOT INSTRUMENT/QUALIFICATION EVALUATION
 2 - (F-4F) PILOT AIR-TO-SURFACE MISSION EVALUATION
 3 - (F-4F) PILOT AIR-TO-AIR MISSION EVALUATION
 4 - WSO QUALIFICATION EVALUATION (See note 5)
 5 - WSO AIR-TO-SURFACE MISSION EVALUATION
 6 - WSO AIR-TO-AIR MISSION EVALUATION
 7 - (QF-4) PILOT MISSION EVALUATION

AREA	NOTES	AREA TITLE	1	2	3	4	5	6	7
29		DEBRIEFING/CRITIQUE	R	R	R	R	R	R	R
30		KNOWLEDGE	R	R	R	R	R	R	R
31	*	AIRMANSHIP	R	R	R	R	R	R	R
32	*	SAFETY	R	R	R	R	R	R	R
33	*	FLIGHT DISCIPLINE	R	R	R	R	R	R	R
34		INSTRUCTOR PERFORMANCE (if applicable)	R	R	R	R	R	R	R
35		INSTRUMENT INTERPRETATION							
36		RADAR SCOPE/SENSOR INTERPRETATION							
37 - 40		NOT USED							

INSTRUMENT

41		HOLDING							
42		INSTRUMENT PENETRATION	R						
43		INSTRUMENT PATTERNS	R						
44		NON-PRECISION APPROACH	R						
45		MISSED APPROACH/CLIMB OUT	R						
46		CIRCLING/SIDE-STEP APPROACH							
47		INSTRUMENT CROSS-CHECK							
48	6	PRECISION APPROACH (QF-4 ONLY)	R						
49 - 50		NOT USED							

TACTICAL EMPLOYMENT

A. GENERAL

51		TACTICAL PLAN		R	R		R	R	
52		TACTICAL EXECUTION		R	R		R	R	
53		GCI/AWACS/CF INTERFACE							
54		RADIO TRANSMISSIONS		R	R				
55		VISUAL/RADAR LOOKOUT		R	R		R	R	
56		MUTUAL SUPPORT (if applicable)		R	R		R	R	
57		TACTICAL NAVIGATION		R			R		
58		INGRESS		R			R		

1 - PILOT INSTRUMENT/QUALIFICATION EVALUATION**2 - (F-4F) PILOT AIR-TO-SURFACE MISSION EVALUATION****3 - (F-4F) PILOT AIR-TO-AIR MISSION EVALUATION****4 - WSO QUALIFICATION EVALUATION (See note 5)****5 - WSO AIR-TO-SURFACE MISSION EVALUATION****6 - WSO AIR-TO-AIR MISSION EVALUATION****7 - (QF-4) PILOT MISSION EVALUATION**

AREA	NOTES	AREA TITLE	1	2	3	4	5	6	7
59		EGRESS		R			R		
60		COMBAT SEPARATION							
61		TIMING		R			R		
62		TRAINING RULES/ROE		R	R		R	R	
63	3	THREAT REACTIONS		R	R		R	R	
64		IN-FLIGHT REPORTS							
65		EA/EP/AAMD		R	R		R	R	
66		WEAPONS SYSTEM UTILIZATION		R	R	R	R	R	
67 - 70		NOT USED							

B. AIR-TO-AIR

71	3	RADAR SEARCH/SORTING			R			R	
72	3	TACTICAL INTERCEPT/PATROL			R			R	
73	3	OFFENSIVE MANEUVERING			R				
74		DEFENSIVE/COUNTEROFFENSIVE MANEUVERING							
75	3	AIR-TO-AIR WEAPONS EMPLOYMENT			R			R	
76 - 80		NOT USED							

C. AIR-TO-SURFACE

81		TARGET ACQUISITION		R			R		
82	4	AIR-TO-GROUND WEAPONS EMPLOYMENT		R			R		
83		RANGE PROCEDURES							
84		THREAT IDENTIFICATION							
85 - 90		NOT USED							

D. QF-4 MCS FLIGHT

91		AUTO TAKEOFF							
92		AIRWORK							
93		GO AROUND	R						
94		MCS PATTERN							

1 - PILOT INSTRUMENT/QUALIFICATION EVALUATION**2 - (F-4F) PILOT AIR-TO-SURFACE MISSION EVALUATION****3 - (F-4F) PILOT AIR-TO-AIR MISSION EVALUATION****4 - WSO QUALIFICATION EVALUATION (See note 5)****5 - WSO AIR-TO-SURFACE MISSION EVALUATION****6 - WSO AIR-TO-AIR MISSION EVALUATION****7 - (QF-4) PILOT MISSION EVALUATION**

AREA	NOTES	AREA TITLE	1	2	3	4	5	6	7
95		REMOTE APPROACH/LANDING	R						
96		SP/CONTROLLER COORDINATION	R						
97-100		NOT USED							

*Denotes Critical Area

NOTES:

1. Airwork/Advanced Handling/Tactical Maneuvering. This area is required for pilots receiving Instrument/ Qualification evaluations. Units will determine appropriate proficiency maneuvers for pilot experience levels. Examples are, but are not limited to:

- a. Aerobatics
- b. Confidence maneuvers
- c. Basic Fighter Maneuver (BFM)
- d. Advanced handling characteristics
- e. Formation (fingertip, tactical, trail)

2. Unusual Attitude Recoveries will be evaluated during EPEs, or if evaluated inflight, will be performed with an FE in the aircraft.

3. It may be impractical to evaluate these required items on certain FTU Instructor evaluations due to student syllabus constraints (e.g. BFM mission checks). Squadron commanders may approve these exceptions on a limited basis to validate instructor effectiveness. Document in the Additional Comments portion of the AF Form 8.

4. Hit/Miss

5. In order for a WSO to accomplish a single mission/qualification evaluation, the examinee will have to perform all required items.

6. Both a PAR and an ILS must be evaluated if equipment and facilities are available. However, if facilities or equipment are not available, the flight evaluation may be completed as long as one precision approach is flown.

Chapter 3

EVALUATION CRITERIA

3.1. General Grading Standards:

3.1.1. The grading criteria in this chapter are divided into three sections: General, Instrument and Tactical Employment. Use all sections for criteria applicable to the events performed on the evaluation.

3.1.2. Where major areas are divided into subareas, only one grade will be assigned to the major areas. Discrepancies on the back of the AF Form 8 will be annotated by subarea.

3.1.3. Areas marked (P) are for pilots only; areas marked (W) are for WSOs only. All other areas are common to all aircrews.

3.2. General:

3.2.1. Area 1--Publications Check:

3.2.1.1. Q. Publications were current, contained all supplements/changes and were properly posted.

3.2.1.2. Q-. Publications contained deficiencies which would not impact flight safety or mission accomplishment.

3.2.1.3. U. Publications were out dated and/or contained deficiencies which would impact flight safety or mission accomplishment.

3.2.2. Area 2--Mission Planning:

3.2.2.1. Q. Developed a sound plan to accomplish the mission. Checked all factors applicable to flight in accordance with applicable directives. Aware of alternatives available if flight cannot be completed as planned. Read and initialed for all items in the Flight Crew Information File (FCIF)/Read Files. Prepared at briefing time.

3.2.2.2. Q-. Same as above, except minor error(s) or omission(s) that did not detract from mission effectiveness. Demonstrated limited knowledge of performance capabilities or approved operating procedures/rules in some areas.

3.2.2.3. U. Made major error(s) or omission(s) that would have prevented a safe or effective mission. Displayed faulty knowledge of operating data or procedures. Did not review or initial FCIF. Not prepared at briefing time.

3.2.3. Area 3--Briefing:

3.2.3.1. Organization:

3.2.3.1.1. Q. Well organized and presented in a logical sequence. Concluded briefing in time to allow for element briefing (if applicable) and preflight of personal equipment, aircraft and ordnance.

3.2.3.1.2. Q-. Events out of sequence, hard to follow, some redundancy.

3.2.3.1.3. U. Confusing presentation. Did not allow time for element briefing (if applicable) and preflight of personal equipment, aircraft and ordnance.

3.2.3.2. Presentation:

3.2.3.2.1. Q. Presented briefing in a professional manner. Effective use of training aids. Flight members clearly understood mission requirements.

3.2.3.2.2. Q-. Did not make effective use of available training aids. Dwelled on non-essential mission items.

3.2.3.2.3. U. Did not use training aids. Redundant throughout briefing. Lost interest of flight members Presentation created doubts or confusion.

3.2.3.3. Mission Coverage:

3.2.3.3.1. Q. Established objectives for the mission. Presented all training events and effective technique discussion for accomplishing the mission.

3.2.3.3.2. Q-. Omitted some minor training events. Limited discussion of techniques.

3.2.3.3.3. U. Did not establish objectives for the mission. Omitted major training events or did not discuss techniques.

3.2.3.4. Flight Member Consideration:

3.2.3.4.1. Q. Considered the abilities of all flight members. Briefed corrective action from previous mission and probable problem areas when appropriate.

3.2.3.4.2. Q-. Did not consider all flight members' abilities. Did not identify probable problem areas.

3.2.3.4.3. U. Ignored flight members' abilities and past problem areas.

3.2.4. Area 4--Pre-Takeoff:

3.2.4.1. Q. Established and adhered to station, start engine, taxi and take-off times to assure thorough preflight, check of personal equipment, element briefing, etc. Accurately determined readiness of aircraft for flight. Performed all checks and procedures prior to takeoff in accordance with approved checklists and applicable directives.

3.2.4.2. Q-. Same as above except for minor procedural deviations which did not detract from mission effectiveness.

3.2.4.3. U. Omitted major item(s) of the appropriate checklist. Major deviations in procedure which would preclude safe mission accomplishment. Failed to accurately determine readiness of aircraft for flight. Errors directly contributed to a late takeoff which degraded the mission or made it non-effective.

3.2.5. Area 5--(P) Takeoff:

3.2.5.1. Q. Maintained smooth aircraft control throughout takeoff. Performed takeoff in accordance with flight manual procedures and techniques.

3.2.5.2. Q-. Minor flight manual procedural or technique deviations. Control was rough or erratic.

3.2.5.3. U. Takeoff potentially dangerous. Exceeded aircraft/systems limitations. Raised gear too early. Failed to establish proper climb attitude. Over-controlled aircraft resulting in excessive deviations from intended flight path.

3.2.6. Area 6--(P) Formation Takeoff:

3.2.6.1. Lead:

3.2.6.1.1. Q. Smooth on controls. Excellent wing-man consideration.

3.2.6.1.2. Q-. Occasionally rough on controls. Lack of wingman consideration made it difficult for the wingman to maintain position.

3.2.6.1.3. U. Rough on the controls. Did not consider the wingman.

3.2.6.2. Wingman:

3.2.6.2.1. Q. Maintained position with only momentary deviations. Maintained appropriate separation and complied with procedures and leader's instructions.

3.2.6.2.2. Q-. Overcontrolled the aircraft to the extent that formation position varied considerably.

3.2.6.2.3. U. Abrupt position corrections. Did not maintain appropriate separation or formation position throughout the takeoff.

3.2.7. Area 7--Departure:

3.2.7.1. (P) Instrument/Visual Flight Rules (IFR/VFR):

3.2.7.1.1. Q. Performed departure as published/directed and complied with all restrictions.

3.2.7.1.2. Q-. Minor deviations in airspeed and navigation occurred during completion of departure.

3.2.7.1.3. U. Failed to comply with published/directed departure instructions.

3.2.7.2. Trail Departure/Radar Rendezvous:

3.2.7.2.1. Q. Effective use of radar. Trail departure/radar rendezvous accomplished using proper procedures and techniques. Provided efficient commentary throughout departure and/or rendezvous.

3.2.7.2.2. Q-. Minor deviations from established or appropriate procedures. Slow to obtain radar lock-on and/or contact due to poor technique. Delayed rendezvous due to poor radar technique or inefficient commentary.

3.2.7.2.3. U. Unable to accomplish trail departure or rendezvous. Gross overshoot or excessively slow rendezvous caused by poor technique. Missed rendezvous.

3.2.8. Area 8--(P) Level-Off:

3.2.8.1. Q. Leveled off smoothly. Promptly established proper cruise airspeed.

3.2.8.2. Q-. Level-off was erratic. Slow in establishing proper cruise airspeed. Slow to set/reset altimeter, as required.

3.2.8.3. U. Level-off was erratic. Exceeded Q- limits. Excessive delay or failed to establish proper cruise airspeed. Failed to set/reset altimeter, as required.

3.2.9. Area 9--Cruise/Navigation:

3.2.9.1. Q. Demonstrated satisfactory capability to navigate using all available means. Used appropriate navigation procedures. Ensured nav aids were properly tuned, identified, and monitored. Complied with clearance instructions. Aware of position at all times. Remained within the confines of assigned airspace. Fix-to-Fix within +/-3 NM.

3.2.9.2. Q-. Minor errors in procedures/use of navigation equipment. Some deviations in tuning, identifying, and monitoring nav aids. Slow to comply with clearance instructions. Had some difficulty in establishing exact position and course. Fix-to- Fix within +/-5 NM.

3.2.9.3. U. Major errors in procedures/use of navigation equipment. Could not establish position. Failed to recognize checkpoints or adjust for deviations in time and course. Did not remain within the confines of assigned airspace. Exceeded parameters for Q-.

3.2.10. Area 10--Formation:

3.2.10.1. Flight Lead:

3.2.10.1.1. Q. Established and maintained appropriate formations utilizing published and briefed procedures. Maintained positive control of flight/element. Smooth on the controls and considered wingman. Planned ahead and made timely decisions. Ensured that wingman flew proper position. Effectively applied Cockpit/Crew Resource Management (CRM) skills throughout mission. For further guidance on CRM, see AFI 11-290, *Cockpit/Crew Resource Management Training Program*.

3.2.10.1.2. Q-. Made minor deviations from published and/or briefed procedures. Demonstrated limited flight management. Occasionally rough on the controls. Maneuvered excessively, making it difficult for wingman to maintain position. Did not always plan ahead and/or hesitant in making decisions. Made minor mistakes applying CRM skills, but did not negatively impact mission accomplishment.

3.2.10.1.3. U. Formation flight not accomplished in accordance with published and/or briefed procedures. Did not establish appropriate formations. Continually rough on the controls. Maneuvered erratically causing wingman to break out or overrun formation. Provided little consideration for wingman. Indecisive. Failed to ensure wingman maintained proper position. Displayed little or no CRM skills, significantly impacting mission accomplishment.

3.2.10.2. Wingman:

3.2.10.2.1. Q. Maintained position in accordance with published and briefed procedures with only momentary deviations. Demonstrated smooth and immediate position corrections. Maintained appropriate separation and complied with leader's instructions. Rejoin was smooth and timely. Effectively applied CRM skills throughout mission. For further guidance on CRM, see AFI 11-290, *Cockpit/Crew Resource Management Training Program*.

3.2.10.2.2. Q-. Made minor deviations to published procedures. Slow to comply with leader's instructions. Varied position considerably. Over controlled. Slow to rejoin. Made minor mistakes applying CRM skills, but did not negatively impact mission accomplishment.

3.2.10.2.3. U. Formation flight not accomplished in accordance with published and/or briefed procedures. Did not comply with leader's instructions. Unable to maintain a formation posi-

tion. Made abrupt position corrections. Did not maintain appropriate separation. Displayed little or no CRM skills, significantly impacting mission accomplishment.

3.2.11. Area 11--In-flight Checks:

3.2.11.1. Q. Performed all in-flight checks as required.

3.2.11.2. Q-. Same as qualified, except for minor deviations or omissions during checks. Did not detract from mission accomplishment.

3.2.11.3. U. Did not perform in-flight checks or monitor systems to the degree that an emergency condition would have developed if allowed to continue uncorrected.

3.2.12. Area 12--Fuel Management:

3.2.12.1. Q. Actively monitored fuel throughout the mission. Complied with all established fuel requirements. Adhered to briefed Joker/Bingo calls.

3.2.12.2. Q-. Errors in fuel management procedures which did not preclude mission accomplishment.

3.2.12.3. U. Failed to monitor fuel status or comply with established fuel requirements. Poor fuel management precluded mission accomplishment. Did not adhere to briefed fuel requirements.

3.2.13. Area 13--Communication/Identification, Friend or Foe (IFF):

3.2.13.1. Q. Complete knowledge of and compliance with correct Communication/IFF procedures. Transmissions concise, accurate and utilized proper terminology. Complied with and acknowledged all required instructions. Thoroughly familiar with communications security requirements and HAVE QUICK.

3.2.13.2. Q-. Occasional deviations from correct procedures required retransmissions. Slow in initiating or missed several required calls. Minor errors or omissions did not significantly detract from situational awareness, threat warning or mission accomplishment. Transmissions contained extraneous matter, were not in proper sequence or used nonstandard terminology. Demonstrated limited knowledge of communications security requirements and HAVE QUICK.

3.2.13.3. U. Incorrect procedures or poor performance caused confusion and jeopardized mission accomplishment. Omitted numerous required radio calls. Inaccurate or confusing terminology significantly detracted from situational awareness, threat warning or mission accomplishment. Displayed inadequate knowledge of communications security requirements and HAVE QUICK.

3.2.14. Area 14--Crew Coordination/CRM:

3.2.14.1. Q. Effectively coordinated with other crewmember without misunderstanding. Effective use of CRM.

3.2.14.2. Q-. Coordinated with other crewmember with minor exceptions. Intra-crew communications were not clear or concise. CRM was the minimum acceptable.

3.2.14.3. U. Breakdown in coordination with other crewmember precluded mission accomplishment or jeopardized safety. CRM was lacking to the extent the mission accomplishment was severely degraded.

3.2.15. Area 15--(P) Airwork/Advanced Handling/Tactical Maneuvering:

3.2.15.1. Q. Aircraft control during maneuvers was positive and smooth. Maneuvers performed IAW directives and appropriate to the tactical situation/ environment. Adhered to established procedures.

3.2.15.2. Q-. Aircraft control during maneuvers not always smooth and positive, but adequate. Minor procedure deviations or lack of full consideration for the tactical situation.

3.2.15.3. U. Aircraft control erratic. Aircraft handling caused unsatisfactory accomplishment of maneuvers. Exceeded Q- criteria. Failed to consider the tactical situation. Temporary loss of aircraft control.

3.2.16. Area 16--(P) Unusual Attitude Recoveries:

3.2.16.1. Q. Smooth, positive recovery to level flight with correct recovery procedures.

3.2.16.2. Q-. Slow to analyze attitude, or erratic in recovery to level flight. Correct recovery procedures used.

3.2.16.3. U. Unable to determine attitude. Improper recovery procedures were used.

3.2.17. Area 17--Weapons System/Built-in Test (BIT) Checks:

3.2.17.1. Q. Completed all checks. Thorough knowledge and performance of weapons system checks.

3.2.17.2. Q-. Completed most weapons system checks. Limited knowledge of checks. Unsure of systems degradation due to check failure.

3.2.17.3. U. Failed to complete weapons system checks. General lack of knowledge on how to perform weapons system checks. Unable to determine systems degradation due to check failures.

3.2.18. Area 18--Air Refueling:

3.2.18.1. Air Refueling Rendezvous:

3.2.18.1.1. Q. Rendezvous effectively accomplished using proper procedures. Demonstrated effective use of radio communications. Used proper communication procedures for briefed Emission Control (EMCON) level.

3.2.18.1.2. Q-. Rendezvous delayed by improper techniques, procedures or radio communications.

3.2.18.1.3. U. Displayed lack of knowledge or familiarity with procedures to the extent that air refueling was or could have been jeopardized. Failed rendezvous as a result of improper procedures. Gross overshoot, spent excessive time in trail or safety of flight jeopardized due to poor judgment.

3.2.18.2. (P) Air Refueling Procedures/Techniques:

3.2.18.2.1. Q. Expeditionously established and maintained proper position. Used proper procedures. Aircraft control was positive and smooth. Refueled without pilot-induced disconnects.

3.2.18.2.2. Q-. Slow to recognize and apply needed corrections to establish and maintain proper position. Aircraft control was not always positive and smooth, but adequate. Accomplished published/directed procedures with deviations or omissions that did not affect the suc-

successful completion of air refueling. Performance caused no more than one pilot-induced disconnect.

3.2.18.2.3. U. Erratic in the pre-contact/refueling position. Made deviations or omissions that affected flight safety and/or the successful completion of the air refueling. Used unacceptable procedures. Excessive time to hookup delayed mission accomplishment. Performance caused more than one pilot-induced disconnect and/or delayed mission accomplishment.

3.2.19. Area 19--Descent:

3.2.19.1. Q. Performed descent as directed, complied with all restrictions.

3.2.19.2. Q-. Performed descent as directed with minor deviations.

3.2.19.3. U. Performed descent with major deviations.

3.2.20. Area 20--(P) Go-Around:

3.2.20.1. Q. Initiated and performed go-around promptly in accordance with flight manual and operational procedures and directives.

3.2.20.2. Q-. Slow to initiate go-around or procedural steps.

3.2.20.3. U. Did not initiate go-around when appropriate or directed. Applied incorrect procedures.

3.2.21. Area 21--Trail Recovery:

3.2.21.1. Q. Performed approach IAW applicable procedures using proper techniques. Effective use of radar. Provided efficient commentary throughout recovery.

3.2.21.2. Q-. Performed approach with minor deviations from established or appropriate procedures. Slow to obtain radar lock-on and/or contact due to poor technique. Inefficient commentary.

3.2.21.3. U. Approach not performed IAW applicable procedures. Unable to accomplish recovery due to poor technique.

3.2.22. Area 22--(P) Emergency Traffic Pattern: (Prior to configuration. Includes simulated single engine and no-flap emergency, pattern, as appropriate.)

3.2.22.1. Q. Complied with all flight manual and operational procedures. Maintained safe maneuvering airspeed/AOA. Flew approach compatible with the situation. Adjusted approach for type emergency simulated.

3.2.22.2. Q-. Minor procedural errors. Erratic airspeed/AOA control. Errors did not detract from safe handling of the situation.

3.2.22.3. U. Did not comply with applicable procedures. Erratic airspeed/AOA control compounded problems associated with the emergency. Flew an approach which was incompatible with the simulated emergency. Did not adjust approach for simulated emergency.

3.2.23. Area 23--(P) Emergency Approach/Landing (configuration through rollout):

3.2.23.1. Q. Used sound judgment. Configured at the appropriate position/altitude. Flew final based on recommended procedures, airspeed/AOA and glidepath. Smooth, positive control of aircraft. Could have landed safely. Set parameters for ejection if necessary. Touchdown point was

IAW applicable guidance and permitted safe stopping in available runway. Arrestment gear could have been used, if appropriate.

3.2.23.2. Q-. Safety not compromised. Configured at a position and altitude which allowed for a safe approach. Could have landed safely with the following deviations:

3.2.23.2.1. Minor deviations from recommended procedures, airspeed/AOA and altitudes.

3.2.23.2.2. Unnecessary maneuvering due to minor errors in planning or judgment.

3.2.23.3. U. Major deviations from recommended procedures, airspeed/AOA and altitudes. Required excessive maneuvering due to inadequate planning or judgment. Could not have landed safely. Touchdown point was not IAW applicable guidance and did not or would not allow for safe stopping on available runway. Arrestment gear was not or could not have been used. Did not set parameters for ejection if approach was unsuccessful.

3.2.24. Area 24--(P) VFR Pattern/Approach:

3.2.24.1. Q. Performed patterns/approaches IAW procedures and techniques outlined in the flight manual, operational procedures and local directives. Aircraft control was smooth and positive. Accurately aligned with runway. Maintained proper/briefed airspeed/AOA. Airspeed -5/+10 knots.

3.2.24.2. Q-. Performed patterns/approaches with minor deviations to procedures and techniques outlined in the flight manual, operational procedures and local directives. Aircraft control was not consistently smooth, but safe. Alignment with runway varied. Slow to correct to proper/briefed airspeed/AOA. Airspeed -5/+15 knots.

3.2.24.3. U. Approaches not performed IAW procedures and techniques outlined in the flight manual, operational procedures and local directives. Erratic aircraft control. Large deviations in runway alignment. Exceeded Q- parameters.

3.2.25. Area 25--(P) Formation Approach/Landing:

3.2.25.1. Flight Lead:

3.2.25.1.1. Q. Smooth on controls and considered wingman. Complied with formation landing procedures. Flew approach as published/directed.

3.2.25.1.2. Q-. Occasionally rough on the controls. Made it difficult for wingman to maintain position. Some procedural deviations. Slow to comply with published procedures.

3.2.25.1.3. U. Did not monitor wingman's position or configuration. Rough on the controls. No consideration for wingman. Major deviations in procedures. Did not fly approach as published/directed. Flight could not land from approach.

3.2.25.2. Wingman:

3.2.25.2.1. Q. Maintained position with only momentary deviations. Smooth and immediate corrections. Maintained appropriate separation and complied with procedures and leader's instructions.

3.2.25.2.2. Q-. Varied position considerably. Overcontrolled.

3.2.25.2.3. U. Abrupt position corrections. Did not maintain appropriate separation. Erratic wing position and/or procedural deviations.

3.2.26. Area 26--(P) Landing. Applicable to normal VFR approaches. Where runway configuration, arresting cable placement or flight manual limitations require an adjustment to the desired touchdown point, a simulated runway threshold will be identified and the grading criteria applied accordingly. For instrument approaches, the examinee should utilize a normal glideslope from either the decision height or from a point where visual acquisition of the runway environment is made.

3.2.26.1. Q. Performed landings IAW procedures and techniques outlined in the flight manual, operational procedures and local directives. Touchdown Point - 150' to 1000' from the runway threshold.

3.2.26.2. Q-. Performed landings with minor deviations to procedures and techniques outlined in the flight manual, operational procedures and local directives. Touchdown Point - 0' to 149' or 1001' to 1500' from the runway threshold.

3.2.26.3. U. Landing not performed IAW procedures and techniques outlined in the flight manual, operational procedures and local directives. Touchdown Point exceeded Q- criteria.

3.2.27. Area 27--After Landing:

3.2.27.1. Q. Appropriate after landing checks and aircraft taxi procedures accomplished in accordance with the flight manual and applicable directives. Completed all required forms accurately.

3.2.27.2. Q-. Same as qualified except some deviations or omissions noted in performance of after landing check and/or aircraft taxi procedures in which safety was not jeopardized. Required forms completed with minor errors.

3.2.27.3. U. Major deviations or omissions were made in performance of after landing check or aircraft taxi procedures which could have jeopardized safety. Data recorded inaccurately or omitted.

3.2.28. Area 28--Flight Leadership:

3.2.28.1. Q. Positively directed the flight during accomplishment of the mission and made timely comments to correct discrepancies when required. Made sound and timely in-flight decisions.

3.2.28.2. Q-. In-flight decisions delayed mission accomplishment or degraded training benefit.

3.2.28.3. U. Did not accomplish the mission or failed to correct in-flight discrepancies. In-flight decisions jeopardized mission accomplishment.

3.2.29. Area 29--Debriefing/Critique:

3.2.29.1. Q. Thoroughly debriefed the mission (or applicable portions). Compared mission results with initial objectives that were established for the mission. Debriefed deviations. Offered corrective guidance as appropriate.

3.2.29.2. Q-. Limited debriefing. Did not thoroughly discuss performance in relationship to mission objectives. Did not debrief all deviations.

3.2.29.3. U. Did not debrief mission deviations or offer corrective guidance.

3.2.30. Area 30--Knowledge. Evaluate all applicable subareas.

3.2.30.1. Aircraft General:

3.2.30.1.1. Q. Demonstrated thorough knowledge of aircraft systems, limitations and performance characteristics.

3.2.30.1.2. Q-. Knowledge of aircraft systems, limitations, and performance characteristics sufficient to perform the mission safely. Demonstrated deficiencies either in depth of knowledge or comprehension.

3.2.30.1.3. U. Demonstrated unsatisfactory knowledge of aircraft systems, limitations or performance characteristics.

3.2.30.2. Emergency Procedures:

3.2.30.2.1. Q. Displayed correct, immediate response to Bold Face and non-Bold Face emergency situations. Effectively used checklist.

3.2.30.2.2. Q-. Response to Bold Face emergencies 100% correct. Response to certain areas of non-Bold Face emergencies or follow-on steps to Bold Face procedures was slow/confused. Used the checklist when appropriate, but slow to locate required data.

3.2.30.2.3. U. Incorrect response for Bold Face emergency. Unable to analyze problems or take corrective action. Did not use checklist, or lacks acceptable familiarity with its arrangement or contents.

3.2.30.3. Flight Rules/Procedures:

3.2.30.3.1. Q. Thorough knowledge of flight rules and procedures.

3.2.30.3.2. Q-. Deficiencies in depth of knowledge.

3.2.30.3.3. U. Inadequate knowledge of flight rules and procedures.

3.2.30.4. Weapon/Tactics/Threat:

3.2.30.4.1. Q. Thorough knowledge of all aircraft weapons systems, weapons effects, tactics and threats applicable to the unit mission.

3.2.30.4.2. Q-. Deficiencies in depth of knowledge or comprehension of weapons systems, weapons effects, tactics and threat knowledge which would not preclude successful mission accomplishment.

3.2.30.4.3. U. Insufficient knowledge of weapons, tactics and threat contributed to ineffective mission accomplishment.

3.2.30.5. Local Area Procedures:

3.2.30.5.1. Q. Thorough knowledge of local procedures.

3.2.30.5.2. Q-. Limited knowledge of local procedures.

3.2.30.5.3. U. Inadequate knowledge of local procedures.

3.2.31. Area 31--Airmanship (Critical):

3.2.31.1. Q. Executed the assigned mission in a timely, efficient manner. Conducted the flight with a sense of understanding and comprehension.

3.2.31.2. U. Decisions or lack thereof resulted in failure to accomplish the assigned mission. Demonstrated poor judgment to the extent that safety could have been compromised.

3.2.32. Area 32--Safety (Critical):

3.2.32.1. Q. Aware of and complied with all safety factors required for safe aircraft operation and mission accomplishment.

3.2.32.2. U. Was not aware of or did not comply with all safety factors required for safe operation or mission accomplishment. Did not adequately clear. Operated the aircraft in a dangerous manner.

3.2.33. Area 33--Flight Discipline (Critical):

3.2.33.1. Q. Demonstrated strict professional flight and pilot discipline throughout all phases of the mission.

3.2.33.2. U. Failed to exhibit strict flight or pilot discipline. Violated or ignored rules or instructions.

3.2.34. Area 34--Instructor Performance:

3.2.34.1. Briefing/Debriefing:

3.2.34.1.1. Q. Presented a comprehensive, instructional briefing/debriefing which encompassed all mission events. Made excellent use of training aids. Excellent analysis of all events/maneuvers. Clearly defined objectives.

3.2.34.1.2. Q-. Minor errors or omissions in briefing/debriefing or mission critique. Occasionally unclear in analysis of events or maneuvers.

3.2.34.1.3. U. Major errors or omissions in briefing/debriefing. Analysis of events or maneuvers was incomplete, inaccurate or confusing. Did not use training aids/reference material effectively. Briefing/debriefing below the caliber of that expected of instructors. Failed to define mission objectives.

3.2.34.2. Demonstration of Maneuvers:

3.2.34.2.1. Q. Performed required maneuvers within prescribed parameters. Provided concise, meaningful in-flight commentary. Demonstrated excellent instructor proficiency.

3.2.34.2.2. Q-. Performed required maneuvers with minor deviations from prescribed parameters. In-flight commentary was sometimes unclear.

3.2.34.2.3. U. Was unable to properly perform required maneuvers. Made major procedural errors. Did not provide in-flight commentary. Demonstrated below average instructor proficiency.

3.2.34.3. Instructor Knowledge:

3.2.34.3.1. Q. Demonstrated in-depth knowledge of procedures, requirements, aircraft systems/performance characteristics, mission and tactics beyond that expected of non-instructors.

3.2.34.3.2. Q-. Deficiencies in-depth of knowledge, comprehension of procedures, requirements, aircraft systems/performance characteristics, mission or tactics.

3.2.34.3.3. U. Unfamiliar with procedures, requirements, aircraft systems/performance characteristics, mission or tactics. Lack of knowledge in certain areas seriously detracted from instructor effectiveness.

3.2.34.4. Ability to Instruct:

3.2.34.4.1. Q. Demonstrated excellent instructor/evaluator ability. Clearly defined all mission requirements and any required additional training/corrective action. Instruction/evaluation was accurate, effective and timely. Was completely aware of aircraft/mission situation at all times.

3.2.34.4.2. Q-. Problems in communication or analysis degraded effectiveness of instruction/evaluation.

3.2.34.4.3. U. Demonstrated inadequate ability to instruct/evaluate. Unable to perform, teach or assess techniques, procedures, systems use or tactics. Did not remain aware of aircraft/mission situation at all times.

3.2.34.5. Training/Evaluation Forms Preparation:

3.2.34.5.1. Q. Completed appropriate training/evaluation records accurately. Adequately assessed and recorded performance. Comments were clear and pertinent.

3.2.34.5.2. Q-. Minor errors or omissions in training/evaluation records. Comments were incomplete or slightly unclear.

3.2.34.5.3. U. Did not complete required forms or records. Comments were invalid, unclear, or did not accurately document performance.

3.2.35. Area 35--Instrument Interpretation:

3.2.35.1. Q. Demonstrated satisfactory knowledge of basic instrument procedures, in-flight penetration and approach procedures. Quickly analyzed flight instruments, determine aircraft attitude and was knowledgeable of required action to correct the aircraft to level flight. Effectively monitored energy levels to ensure parameters were not exceeded.

3.2.35.2. Q-. Demonstrated limited knowledge of instrument procedures. Slow to recognize aircraft attitudes and corrective actions required, but able to determine proper corrections.

3.2.35.3. U. Displayed faulty or insufficient knowledge of instrument procedures. Unable to properly interpret instruments or recognize aircraft attitude.

3.2.36. Area 36--Radar Scope/Sensor Interpretation:

3.2.36.1. Q. Correctly interpreted radar/sensor display. Was able to compensate for system errors or unanticipated developments to successfully employ radar/sensor.

3.2.36.2. Q-. Slow to interpret radar/sensor display. Had difficulties compensating for system errors or unanticipated developments.

3.2.36.3. U. Could not interpret radar/sensor display. Could not compensate for or identify system errors or unanticipated developments.

3.2.37. Areas 37 - 40. Not used.

3.3. Instrument:

3.3.1. Area 41--Holding:

3.3.1.1. Q. Performed entry and holding IAW published procedures and directives. TACAN holding pattern limit exceeded by not more than ± 2 NM.

3.3.1.2. Q-. Minor deviations to procedures or directives. TACAN holding pattern limit exceeded by not more than ± 3 NM.

3.3.1.3. U. Holding was not IAW published procedures and directives. Exceeded criteria for Q- or holding pattern limits.

3.3.2. Area 42--(P) Instrument Penetration (Initial Approach Fix to Final Approach Fix/Descent Point):

3.3.2.1. Q. Performed the penetration and approach as published/directed and IAW applicable flight manuals. Complied with all restrictions. Made smooth and timely corrections.

3.3.2.2. Q-. Performed the penetration and approach with minor deviations. Complied with all restrictions. Slow to make corrections.

3.3.2.3. U. Performed the penetration and approach with major deviations. Erratic corrections.

3.3.3. Area 43--(P) Instrument Patterns (Downwind/Base Leg):

3.3.3.1. Q. Performed procedures as published or directed and IAW flight manual. Smooth and timely response to controller instruction.

3.3.3.2. Q-. Performed procedures with minor deviations. Slow to respond to controller instruction.

3.3.3.3. U. Performed procedures with major deviations/erratic corrections. Failed to comply with controller instruction.

3.3.4. Area 44--(P) Non-Precision Approach:

3.3.4.1. Q. Adhered to all published/directed procedures and restrictions. Used appropriate descent rate to arrive at Minimum Descent Altitude (MDA) at or before the Visual Descent Point (VDP) or Missed Approach Point (MAP). Position would have permitted a safe landing. Maintained proper/briefed AOA.

3.3.4.1.1. Airspeed $+10/-5$ kts

3.3.4.1.2. Heading ± 5 degrees (Airport Surveillance Radar (ASR))

3.3.4.1.3. Course ± 5 degrees at MAP

3.3.4.1.4. Minimum Descent Altitude $+100/-0$ feet

3.3.4.2. Q-. Performed approach with minor deviations. Arrived at MDA at or before the MAP, but past the VDP. Position would have permitted a safe landing. Slow to correct to proper/briefed AOA.

3.3.4.2.1. Airspeed $+15/-5$ kts

3.3.4.2.2. Heading ± 10 degrees (ASR)

3.3.4.2.3. Course ± 10 degrees at MAP

3.3.4.2.4. Minimum Descent Altitude $+150/-50$ feet

3.3.4.3. U. Did not comply with published/directed procedures or restrictions. Exceeded Q- limits. Maintained steady state flight below the MDA, even though the -50 foot limit was not exceeded. Could not land safely from the approach.

NOTE: The -50 foot tolerance applies only to momentary excursions.

3.3.5. Area 45--(P) Missed Approach/Climb Out:

3.3.5.1. Q. Executed missed approach/climb out as published directed. Completed all procedures IAW applicable flight manual.

3.3.5.2. Q-. Executed missed approach/climb out with minor deviations. Slow to comply with published procedures, controller's instructions or flight manual procedures.

3.3.5.3. U. Executed missed approach/climb out with major deviations, or did not comply with applicable directives.

3.3.6. Area 46--(P) Circling/Side-Step Approach:

3.3.6.1. Q. Performed circling/side-step approach in accordance with procedures and techniques outlined in the flight manual and AFMAN 11-217. Aircraft control was positive and smooth. Proper runway alignment.

3.3.6.2. Q-. Performed circling/side-step approach with minor deviations to procedures and techniques outlined in the flight manual and AFMAN 11-217. Aircraft control was not consistently smooth, but safe. Runway alignment varied, but go-around not required.

3.3.6.3. U. Circling/side-step approach not performed in accordance with procedures and techniques outlined in the flight manual and AFMAN 11-217. Erratic aircraft control. Large deviations in runway alignment required go-around.

3.3.7. Area 47--Instrument Cross Check:

3.3.7.1. Q. Effective instrument cross check. Smooth and positive aircraft control throughout flight. Meets "Q" criteria listed in General Criteria, applicable special events or instrument final approaches.

3.3.7.2. Q-. Slow instrument cross check. Aircraft control occasionally abrupt to compensate for recognition of errors. Meets "Q-" criteria listed in General Criteria, applicable special events or instrument final approaches.

3.3.7.3. U. Inadequate instrument cross check. Erratic aircraft control. Exceeded Q- limits.

3.3.8. Area 48--(P) Precision Approach:

3.3.8.1. Q. Performed procedures as directed and IAW applicable flight manual. Smooth and timely response to controller's instructions. Complied with decision height. Position would have permitted a safe landing. Maintained proper/briefed AOA. Maintained glide path with only minor deviations.

3.3.8.1.1. Airspeed +10/-5 kts

3.3.8.1.2. Heading within 5 degrees of controller's instructions (PAR)

3.3.8.1.3. Glide Slope/Azimuth within one dot (ILS)

3.3.8.2. Q- Performed procedures with minor deviations. Slow to respond to controller's instructions. Position would have permitted a safe landing. Improper glide path control. Slow to correct to proper/briefed AOA. Initiated appropriate action at Decision Height +/- 50 feet.

3.3.8.2.1. Airspeed +15/-10 kts

3.3.8.2.2. Heading within 10 degrees of controller's instructions (PAR)

3.3.8.2.3. Glide Slope within one dot low/two dots high (ILS)

3.3.8.2.4. Azimuth within two dots (ILS)

3.3.8.3. U. Performed procedures with major deviations. Erratic corrections. Did not respond to controller's instructions. Erratic glide path control. Did not comply with decision height and/or position would not have permitted a safe landing.

3.3.9. Areas 49 - 50. Not used.

3.4. Tactical Employment:

3.4.1. General:

3.4.1.1. Area 51--Tactical Plan:

3.4.1.1.1. Q. Well-developed plan that included consideration of mission objectives, the threat and capabilities of all flight members. Addressed contingencies in development of plan.

3.4.1.1.2. Q-. Minor omissions in the plan resulted in less than optimum achievement of objectives and detracted from mission effectiveness. Planned tactics resulted in unnecessary difficulty.

3.4.1.1.3. U. Major errors in the plan precluded accomplishment of the stated objectives.

3.4.1.2. Area 52--Tactical Execution:

3.4.1.2.1. Q. Applied tactics consistent with the threat, current directives, and good judgment. Executed the plan and achieved mission goals. Quickly adapted to changing environment. Maintained situational awareness.

3.4.1.2.2. Q-. Minor deviations from tactical plan which did not result in an ineffective mission. Slow to adapt to changing environment. Poor situational awareness.

3.4.1.2.3. U. Unable to accomplish the mission due to major errors of commission or omission during execution of the plan. Situational awareness lost.

3.4.1.3. Area 53--Ground Control Intercept (GCI)/Airborne Warning and Control System (AWACS)/Composite Force Interface:

3.4.1.3.1. Q. Effectively planned for and used GCI/AWACS/Composite Force Assets to enhance mission and achieve objectives. No confusion between GCI/AWACS/Composite Force Assets and fighters.

3.4.1.3.2. Q-. Minor confusion between GCI/AWACS/Composite Force Assets and fighters. Less than optimum use of GCI/AWACS/Composite Force Assets which did not affect the fighter's offensive advantage.

3.4.1.3.3. U. Inadequate or incorrect use of GCI/AWACS/Composite Force Assets resulted in loss of offensive potential.

3.4.1.4. Area 54--Radio Transmission - Usage and Discipline:

3.4.1.4.1. Q. Radio communications were concise, accurate and effectively used to direct maneuvers or describe the tactical situation.

3.4.1.4.2. Q-. Minor terminology errors or omissions occurred, but did not significantly detract from situational awareness, mutual support or mission accomplishment. Extraneous comments over primary or secondary radios presented minor distractions.

3.4.1.4.3. U. Radio communications over primary/secondary radios were inadequate or excessive. Inaccurate or confusing terminology significantly detracted from mutual support, situational awareness or mission accomplishment.

3.4.1.5. Area 55--Visual/Radar Lookout:

3.4.1.5.1. Q. Demonstrated thorough knowledge and effective application of visual/radar lookout techniques for all phases of flight.

3.4.1.5.2. Q-. Demonstrated limited knowledge of visual/radar lookout techniques. Did not establish lookout responsibilities for all phases of flight. Slow to acquire threats to flight or targets to be attacked.

3.4.1.5.3. U. Demonstrated unsatisfactory knowledge and/or application of visual/radar lookout responsibilities. Allowed threat to penetrate to short range undetected.

3.4.1.6. Area 56--Mutual Support:

3.4.1.6.1. Q. Maintained mutual support during entire engagement thus sustaining an offensive posture and/or negating all attacks. Adhered to all engaged and support responsibilities.

3.4.1.6.2. Q-. Mutual support occasionally broke down resulting in temporary confusion or the loss of an offensive advantage. Demonstrated limited knowledge of engaged and support responsibilities.

3.4.1.6.3. U. Mutual support broke down resulting in the flight being put in a defensive position from which all attacks were not negated. Demonstrated inadequate knowledge of engaged and support responsibilities.

3.4.1.7. Area 57--Tactical Navigation:

3.4.1.7.1. General:

3.4.1.7.1.1. Q. Navigated to desired destination and remained geographically oriented during the tactical portion of the mission along the desired route. Altitude and route of flight reflected consideration for enemy threats. Maintained terrain awareness. Complied with established altitude minimums. Adhered to airspace restrictions.

NOTE: Airspace restrictions include buffer zones, restrictive fire plans, fire support coordination lines, friendly artillery fans, ingress/egress corridors and other airspace restrictions.

3.4.1.7.1.2. Q-. Deviations from planned route of flight were recognized and corrected. Maintained terrain awareness. Altitude control contributed to exposure to threats for brief periods. Did not optimize terrain masking (if applicable).

3.4.1.7.1.3. U. Failed to locate desired destination. Deviations from planned route of flight exposed flight to threats. Violated airspace restrictions or altitude minimums. Poor airspeed/altitude control contributed to disorientation. Inadequate terrain awareness. Did not use terrain masking (if applicable).

3.4.1.7.2. High Altitude:

3.4.1.7.2.1. Q. Used proper procedures/DR techniques. Maintained course within 3 NM. Properly used available aids to navigation. Maintained altitude consistent with mission requirements/restrictions.

3.4.1.7.2.2. Q-. Errors in procedures/techniques. Maintained course within 6 NM. Minor errors in use of available navigation aids. Minor deviations from planned altitude.

3.4.1.7.2.3. U. Unable to use DR or appropriate navigation aids. Exceeded Q- tolerances. Major altitude deviations.

3.4.1.7.3. Medium Altitude:

3.4.1.7.3.1. Q. Demonstrated satisfactory capability to adjust for deviations in time and course; only minor corrections required.

3.4.1.7.3.2. Q-. Medium level course and airspeed control resulted in large corrections. Minor error in procedures/ use of navigation equipment.

3.4.1.7.3.3. U. Failed to recognize checkpoints or adjust for deviations in course. Major errors in procedures/use of navigation equipment.

3.4.1.7.4. Low Altitude:

3.4.1.7.4.1. Q. Demonstrated satisfactory capability to adjust for deviations in time and course; only minor corrections required. Remained oriented within 2 NM of planned course or adjusted course and within route or airspace boundaries. Used terrain masking as circumstances allowed.

3.4.1.7.4.2. Q-. Low level altitude and airspeed control resulted in large corrections. Remained oriented within 3 NM of planned course and/or adjusted course within route boundaries.

3.4.1.7.4.3. U. Failed to recognize checkpoints or adjust for deviations in time and course. Exceeded low level route boundaries. Did not use terrain masking if available and tactically required. Exceeded Q- parameters. Major errors in procedures/use of navigation equipment. Violated low level instructions/restricted airspace.

3.4.1.8. Area 58--Ingress:

3.4.1.8.1. Q. Aware of all known/simulated threats and defenses. Employed effective use of terrain masking and/or route and altitude selection.

3.4.1.8.2. Q-. Ignored some of the known/simulated threats and defenses. Improper use of terrain masking and/or route and altitude selection resulted in unnecessary exposure.

3.4.1.8.3. U. Failed to honor known/simulated threats and defenses significantly reducing survivability. Failed to employ effective terrain masking and/or route or altitude threat deconfliction.

3.4.1.9. Area 59--Egress:

3.4.1.9.1. Q. Effectively used evasive maneuvers and terrain masking to complete an expeditious egress from the target area. Flight/element join-up was accomplished as soon as possible without undue exposure to enemy defenses.

3.4.1.9.2. Q-. Egress contributed to unnecessary exposure to threats and delayed flight join-up and departure from target area.

3.4.1.9.3. U. Egress caused excessive exposure to threats. Flight/element join-up was not accomplished or resulted in excessive exposure to threats.

3.4.1.10. Area 60--Combat Separation:

3.4.1.10.1. Q. Adhered to briefed/directed separation procedures. Positive control of flight/element during separation. Maintained mutual support with adversary unable to achieve valid simulated missile/gun-firing parameters.

3.4.1.10.2. Q-. Minor deviations from briefed/directed separation procedures. Limited control of flight/element during separation. Allowed mutual support to break down intermittently.

3.4.1.10.3. U. Did not adhere to briefed/directed separation procedures to the degree that an emergency fuel condition would have developed if allowed to continue uncorrected. Could not effectively separate from the engagement or could not regain mutual support.

3.4.1.11. Area 61--Timing. Time will be based on pre-planned Time On Target (TOT) (ordnance impact) or vulnerability period (Defensive Counter Air (DCA)) or push time (Offensive Counter Air (OCA) Sweep). Adjustments in TOT will be made for non-crew caused delays. In the case of "no spot", timing will be adjusted to a bomb release or "off" call. If range clearance is delayed, time at a pre-planned Initial Point may be substituted for TOT. The FE may widen this timing criterion if the examinee was forced to maneuver extensively along the ingress route due to simulated enemy air or ground defense reactions and/or weather.

3.4.1.11.1. Air-to-Air Escort/Sweep/Combat Air Patrol:

3.4.1.11.1.1. Q. Arrived on station not more than 1 minute late. Covered TOT.

3.4.1.11.1.2. Q-. Arrived on station not more than 2 minutes late. Covered TOT.

3.4.1.11.1.3. U. Exceeded Q- parameters. Failed to cover TOT due to inadequate planning or use of resources.

3.4.1.11.2. Air-to-Surface:

3.4.1.11.2.1. Q. ± 1 minute. Covered TOT.

3.4.1.11.2.2. Q-. ± 2 minutes. Covered TOT.

3.4.1.11.2.3. U. Exceeded Q- parameters. Failed to cover TOT due to inadequate planning or use of resources.

3.4.1.12. Area 62--Training Rules/Rules of Engagement (ROE):

3.4.1.12.1. Q. Adhered to and knowledgeable of all training rules/ROE.

3.4.1.12.2. Q-. Minor deviations. Made timely and positive corrections. Did not jeopardize safety of flight.

3.4.1.12.3. U. Significant deviations indicating a lack of knowledge of training rules/ROE.

3.4.1.13. Area 63--Threat Reactions:

3.4.1.13.1. Q. Threat reactions were timely and correct. Accomplished appropriate countermeasures and performed maneuvers to counter threat.

3.4.1.13.2. Q-. Threat reactions were slow or inconsistent. Slow to accomplish appropriate countermeasures or perform maneuvers to counter threat.

3.4.1.13.3. U. Numerous threat reactions were omitted or incorrect. Failed to accomplish countermeasures or perform maneuvers to counter threat.

3.4.1.14. Area 64--In-flight Report:

3.4.1.14.1. Q. Gave accurate, precise in-flight reports in correct format.

3.4.1.14.2. Q-. Deviated from established procedures/format. Completed reports.

3.4.1.14.3. U. Failed to make in-flight reports. Unfamiliar with in-flight reporting procedures.

3.4.1.15. Area 65--EA/EP/AAMD:

3.4.1.15.1. Q. Interpretation of threat scope aural tones, warning lights and operation of Counter Measure Dispensers (CMD)/systems, indicated thorough knowledge.

3.4.1.15.2. Q-. Interpretation of threat scope, aural tones, warning lights and operation of CMD/systems indicated limited knowledge.

3.4.1.15.3. U. Displayed unsatisfactory interpretation of threat scope, aural tones, warning lights or operation of CMD/system.

3.4.1.16. Area 66--Weapons System Utilization:

3.4.1.16.1. Q. Correctly utilized the weapon system to deliver the desired ordnance (actual or simulated). Executed all required procedures to successfully employ the weapon.

3.4.1.16.2. Q-. Late to prepare the weapon system to deliver the desired ordnance. Minor procedural errors degraded weapons employment.

NOTE: A successful reattack following a dry pass caused by minor procedural errors during the delivery is an example of degraded weapons employment.

3.4.1.16.3. U. Did not correctly prepare the weapon system to deliver the desired ordnance. Improper procedures during the attack resulted in unsuccessful weapons delivery.

3.4.1.17. 67 - 70. Not used.

3.4.2. Air-to-Air:

3.4.2.1. Area 71--Radar Search/Targeting/Sorting Technique:

3.4.2.1.1. Q. Demonstrated satisfactory knowledge and effective application of radar search/sorting techniques for all phases of flight. Recognized chaff/EA and compensated for lock transfer. Utilized radar, with proper EP techniques, to maximum extent possible.

3.4.2.1.2. Q-. Demonstrated adequate knowledge of radar search techniques. Did not establish radar search responsibilities for all phases of flight. Allowed chaff/EA to excessively delay

target acquisition/intercept. Late contacts resulted in excessive maneuvering during target acquisition.

3.4.2.1.3. U. Demonstrated unsatisfactory knowledge and/or application of radar search responsibilities. Unable to counter the threat/combat chaff. Did not acquire the target due to error.

3.4.2.2. Area 72--Tactical Intercept/Patrol:

3.4.2.2.1. Q. Thorough knowledge and correct employment of tactical intercept procedures. Intercept resulted in a successful Visual Identification (VID), followed by an offensive attack, if applicable. CAP successfully employed and designated airspace patrolled in a satisfactory manner.

3.4.2.2.2. Q-. Limited knowledge of tactical intercept procedures. Intercept resulted in a successful VID; however, large or difficult corrections were required to complete the pass and subsequent attack. CAP could have been more effective.

3.4.2.2.3. U. Intercept unsuccessful due to poor techniques and/or improper procedures. Intercept terminated in a counteroffensive position. Designated CAP airspace not patrolled effectively or attacks not negated.

3.4.2.3. Area 73--(P) Offensive Maneuvering:

3.4.2.3.1. Q. Effective use of basic fighter maneuvering and air combat maneuvering to attack/counter opposing aircraft. Good aircraft control. Effectively managed energy level during engagements.

3.4.2.3.2. Q-. Limited maneuvering proficiency; however, during engagements did not effectively counter opposing aircraft. Occasionally mismanaged energy levels, jeopardizing offensive advantage.

3.4.2.3.3. U. Unsatisfactory knowledge or performance of maneuvers, aircraft handling or energy management. Lost offensive advantage.

3.4.2.4. Area 74--Defensive/Counteroffensive Maneuvering:

3.4.2.4.1. Pilot:

3.4.2.4.1.1. Q. Performed correct initial move to counter attack of opposing aircraft. Used correct maneuvers to negate the threat.

3.4.2.4.1.2. Q-. Some hesitation or confusion during initial stages of counteroffensive/defensive situation. Minor errors in energy management or BFM delayed negating the attack of an opposing aircraft.

3.4.2.4.1.3. U. Unable to negate attack of opposing aircraft.

3.4.2.4.2. WSO:

3.4.2.4.2.1. Q. Demonstrated a satisfactory knowledge and understanding of initial moves. Directed the initial move correctly to counter attack of opposing aircraft. Directed timely counters for the pilot when necessary.

3.4.2.4.2.2. Q-. Limited knowledge and understanding of initial moves. Some hesitation or confusion during initial stages of the defensive situation.

3.4.2.4.2.3. U. Demonstrated inadequate knowledge and understanding of initial moves. Unable to direct maneuvers to negate attack of opposing aircraft.

3.4.2.5. Area 77--Air-to-Air Weapons Employment. Snapshots assessed as misses may be discounted from computations if attacks were tactically sound and attempted within designated parameters.

3.4.2.5.1. Q. Demonstrated proper knowledge of missile/gun-firing procedures and attack parameters. Simulated missile/gun-firing were accomplished at each opportunity and within designated parameters. Successfully completed 75 percent (or two of three/one of two) of attempted shots.

3.4.2.5.2. Q-. Demonstrated limited knowledge of missile/gun firing procedures and attack parameters. Simulated employment of weapons was successful but made minor errors which did not affect overall result. Slow to recognize appropriate parameters. Successfully completed 50 percent or more of all attempted shots (four or more attempts).

3.4.2.5.3. U. Demonstrated inadequate knowledge of missile/gun firing procedures or attack parameters. Attempts to simulate weapons employment were unsuccessful due to pilot error. Did not meet Q- criteria.

3.4.2.6. Areas 76 - 80. Not used.

3.4.3. Air-to-Surface:

3.4.3.1. Area 81--Target Acquisition:

3.4.3.1.1. Q. Target acquired on the first attack or, if missed due to difficult target identification features, a successful reattack was accomplished. For multiple-target scenarios, all targets were acquired on the first attack or with a successful reattack.

3.4.3.1.2. Q-. Late to acquire the target, degraded the initial attack or reattack. For multiple-target scenarios, 50 percent or more of the targets were acquired on the first attack or with a successful reattack.

3.4.3.1.3. U. Target was not acquired. For multiple target scenarios, less than 50 percent of the targets were acquired on the first attack or with a successful reattack.

NOTE: A successful reattack is defined as being within parameters to effectively employ the planned weapons against the target.

3.4.3.2. Area 82--Air-to-Ground Weapons Employment:

NOTES:

1. Scoreable Ranges. When weapons deliveries are performed on different ranges during the same mission, or like deliveries constituting separate events are performed on the same range, all events will be evaluated and the area grade will be predicated upon the criteria below.
2. Unscoreable Ranges. Hit/Miss will be determined by the FE based on impact of the simulated ordnance and desired weapons effects for the pass flown.
3. Simulated Releases. Hit/Miss will be determined by the FE based on VTR film, etc.

4. The FE will determine Hit/Miss by reference to VTR film in cases where unexplained weapons delivery misses occur (e.g. wind shears).

3.4.3.2.1. Single Pass (Tactical Attack):

3.4.3.2.1.1. Q. Demonstrated complete knowledge of weapons delivery procedures, attack parameters, and weapons computations for the events performed. Bomb Score was within hit criteria.

3.4.3.2.1.2. Q-. Minor errors in knowledge of weapons delivery procedures, attack parameters, or weapons computations for the events performed. Bomb Score less than or equal to 150% of hit criteria.

3.4.3.2.1.3. U. Demonstrated inadequate knowledge of weapons delivery procedures, attack parameters, or weapons computations for the events flown. Failed to deliver ordinance on original attack or reattack due to pilot error (switch error, navigation error, etc.). Bomb Score exceeded 150% of hit criteria.

3.4.3.2.2. Single Event:

3.4.3.2.2.1. Q. Demonstrated complete knowledge of weapons delivery procedures, attack parameters, weapons computations and error analysis for the events performed. At least 50% of all bombs were within hit criteria.

DB

Miss/Hit/Hit/Miss

3.4.3.2.2.2. Q-. Minor errors in knowledge of weapons delivery procedures, attack parameters, weapons computations, or error analysis for the events performed. At least 50% of all bombs were within hit criteria.

DB

Miss/Hit/Hit/Miss

3.4.3.2.2.3. U. Demonstrated inadequate knowledge of weapons delivery procedures, attack parameters, weapons computations or error analysis for the events flown. Less than 50% of all bombs were within hit criteria.

DB

Miss/Hit/Miss/Miss

3.4.3.2.3. Multiple Events:

3.4.3.2.3.1. Q. Qualified within the applicable criteria in all events attempted. At least 50% of all bombs in each event were within hit criteria.

DB

Miss/Hit

LALD

Miss/Hit

LAB

Miss/Hit

3.4.3.2.3.2. Q-. Minor errors in knowledge of weapons delivery procedures, attack parameters, weapons computations, or error analysis for the events performed. Less than Q criteria.

DB
Miss/Miss

LALD
Miss/Hit

LAB
Miss/Hit

3.4.3.2.3.3. U. Demonstrated inadequate knowledge of weapons delivery procedures, attack parameters, weapons computations, or error analysis for the events flown. Unqualified in greater than 50% of all events attempted.

DB
Miss/Miss

LALD
Miss/Miss

LAB
Hit/Hit

3.4.3.3. Area 83--Range Procedures:

3.4.3.3.1. Q. Used proper procedures for entering and exiting the range. Range operations followed established procedures.

3.4.3.3.2. Q-. Minor deviations from established procedures for range entry, exit or operations.

3.4.3.3.3. U. Major deviations from established procedures for range entry, exit or operations.

3.4.3.4. Area 84--Threat Identification/Response:

3.4.3.4.1. Pilot:

3.4.3.4.1.1. Q. Prompt analysis of the degree and direction of threat. Timely and appropriate evasive action.

3.4.3.4.1.2. Q-. Slow to analyze the degree and direction of threat. Slow to take appropriate evasive action.

3.4.3.4.1.3. U. Failed to analyze the degree or direction of threat. Failed to take appropriate evasive action.

3.4.3.4.2. WSO:

3.4.3.4.2.1. Q. Rapidly identified and analyzed signals. Procedures used in operation of equipment enhanced mission accomplishment. Efficient and timely allocation of electronic resources to counter applicable threats/defenses.

3.4.3.4.2.2. Q-. Slow to identify and analyze signals. Procedures used in operation of equipment aided mission accomplishment. Minor deviations in allocating electronic resources to counter threats/defenses.

3.4.3.4.2.3. U. Failed to identify and analyze threats/defenses posing an immediate threat to the flight/attack force. Demonstrated insufficient knowledge of the electronic equipment operation or interpretation. Poor allocation of electronic resources in countering threats/defenses.

3.4.3.5. Areas 85 - 90. Not used.

3.4.4. QF-4 MCS Flight:

3.4.4.1. Area 91--Auto Takeoff:

3.4.4.1.1. Q. Ensured proper aircraft parameters throughout takeoff. Controlled in accordance with flight manual procedures.

3.4.4.1.2. Q-. Minor flight manual procedural deviations. Allowed some under or over control at lift-off.

3.4.4.1.3. U. Allowed lift-off to be potentially dangerous. Allowed aircraft/controller to exceed aircraft/systems limitations.

3.4.4.2. Area 92--Airwork:

3.4.4.2.1. Q. Ensured maneuvers performed IAW brief and aware of aircraft parameters during maneuvers. Adhered to established parameters.

3.4.4.2.2. Q-. Slow to recognize and/or take appropriate actions to minimize deviations from briefed parameters. Minor procedural deviations or lack of full considerations for the situation.

3.4.4.2.3. U. Allowed aircraft to deviate into unsafe parameters during the maneuver. Exceeded Q- criteria.

3.4.4.3. Area 93--Go-Around:

3.4.4.3.1. Q. Initiated and performed or told controller to go-around promptly IAW flight manual and operational procedures and directives.

3.4.4.3.2. Q-. Slow to initiate procedural steps to go-around or tell controller to go-around.

3.4.4.3.3. U. Did not self-initiate go-around when appropriate or directed. Techniques unsafe or applied incorrect procedures.

3.4.4.4. Area 94--MCS Patterns:

3.4.4.4.1. Q. Ensured patterns/approaches IAW procedures and techniques outlined by operational procedures and local directives. Ensured aircraft had accurate runway alignment and proper airspeed.

3.4.4.4.2. Q-. Slow to recognize and/or take appropriate actions to prevent significant deviations in procedures or local directives. Allowed significant deviations in runway alignment without notifying the controller. Slow to notice deviations from briefed airspeed.

3.4.4.4.3. U. Allowed aircraft to fly approaches not IAW procedures and techniques outlined in operational and local directives. Allowed aircraft to have large deviations in runway alignment and airspeed making aircraft approach unsafe.

3.4.4.5. Area 95--Auto Approach/Landing:

3.4.4.5.1. Q. Ensured landings IAW procedures and techniques outlined in operational and local directives.

3.4.4.5.2. Q-. Slow to recognize and/or take appropriate actions to prevent significant deviations from procedures or local directives.

3.4.4.5.3. U. Failed to provide input or take control of the aircraft in a timely manner to prevent aircraft damage or runway departure.

3.4.4.6. Area 96--Safety Pilot/Controller Coordination:

3.4.4.6.1. Q. Appropriately briefed indications and procedures for controller to safety pilot transfer of aircraft control and vice versa. Debriefed control transfers that were not flown as briefed or planned.

3.4.4.6.2. Q-. Omitted briefing some indication and/or procedures for controller to safety pilot transfer of aircraft control which subsequently affected the flight. Omitted debriefing transfer of aircraft control procedures which were not IAW the brief or local procedures. Flight safety was not compromised.

3.4.4.6.3. U. Did not brief/debrief indications and procedures for controller to safety pilot transfer of aircraft control. Transfer of aircraft control unsafe or unclear creating confusion about who was flying the aircraft.

3.4.4.7. Areas 97 - 100. Not used.

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Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFPD 11-2, *Aircraft Rules and Procedures*

AFPD 11-4, *Aviation Service*

AFI 11-202V2, *Aircrew Standardization/Evaluation Program*

AFMAN 11-210, *Instrument Refresher Course (IRC) Program*

AFMAN 11-217, *Instrument Flight Procedures*

AFI 11-290, *Cockpit/Crew Resource Management Training Program*

AFI 33-360V1, *Publications Management Program*

AFMAN 37-139, *Records Disposition Schedule*

AFI 37-160V8, *The Air Force Publications and Management Program--Developing and Processing Forms*

GI 11-F4, *Aircrew Training*

Abbreviations and Acronyms

AAMD—All Aspect Missile Defense

ACMI—Air Combat Maneuvering Instrumentation

AOA—Angle of Attack

ASR—Airport Surveillance Radar

ATD—Aircrew Training Device

AWACS—Airborne Warning and Control System

BFM—Basic Fighter Maneuver

BIT—Built in test

BMC—Basic Mission Capable

CMD—Counter Measure Dispensers

CPT—Cockpit Procedures Trainer

CRM—Cockpit/Crew Resource Management

DACBT—Dissimilar Air Combat

DB—Dive Bomb

DCA—Defensive Counter Air

EA—Electronic Attack

EMCON—Emission Control

EP—Electronic Protect

EPE—Emergency Procedure Evaluation

FCIF—Flight Crew Information File

FE—Flight Examiner

FMT—Full Mission Trainers

FTU—Formal Training Unit

GCI—Ground Control Intercept

GI—German Air Force Instruction

HHQ—Higher Headquarter

IFF—Identification, Friend or Foe

IFR—Instrument/Visual Flight Rules

IP—Instructor Pilot

IRC—Instrument Refresher Course

IW—Instructor WSO

LAB—Low Angle Bomb

LALD—Low Angle Low Drag

LAS—Low Angle Strafe

LOWAT—Low Altitude Training

MAP—Missed Approach Point

MCS—Mobile Control System

MDA—Minimum Descent Altitude

OCA—Offensive Counter Air

OFT—Operational Flying Trainers

RAP—Ready Aircrew Program

ROE—Rule of Engagement

SP—Safety Pilot

TOT—Time over Target

VDP—Visual Descent Point

VFR—Visual Flight Rules

VID—Visual Identification

VLD—Valid

VTR—Video Tape Recorder

WSO—Weapon Systems Officer

WTT—Weapons and Tactics Trainers

Terms

Deviation—Performing an action not in sequence with current procedures, directives, or regulations. Performing action(s) out of sequence due to unusual or extenuating circumstances is not considered a deviation. In some cases, momentary deviations may be acceptable; however, cumulative momentary deviations will be considered in determining the overall qualification level.

Error—Departure from standard procedures. Performing incorrect actions or recording incorrect information.

Major—Detracted from mission accomplishment. Adversely affected use of equipment, or violated safety.

Minor—Did not detract from mission accomplishment.

Omission—To leave out a required action or annotation.

Addresses

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Attachment 2

IC 2000-1 TO AFI 11-2F/QF-4, VOLUME 2, AIRCREW EVALUATION CRITERIA

1 MARCH 2000

SUMMARY OF REVISIONS

This change incorporates interim change (IC) 2000-1, which adds precision approach evaluation criteria for the QF-4. See the last attachment of the publication, IC 2000-1, for the complete IC. A (I) indicates revision from the previous edition.

Table 2.1. Evaluation Requirements.

1 - PILOT INSTRUMENT/QUALIFICATION EVALUATION									
2 - (F-4F) PILOT AIR-TO-SURFACE MISSION EVALUATION									
3 - (F-4F) PILOT AIR-TO-AIR MISSION EVALUATION									
4 - WSO QUALIFICATION EVALUATION (See note 5)									
5 - WSO AIR-TO-SURFACE MISSION EVALUATION									
6 - WSO AIR-TO-AIR MISSION EVALUATION									
7 - (QF-4) PILOT MISSION EVALUATION									
AREA	NOTES	AREA TITLE	1	2	3	4	5	6	7
GENERAL									
1		PUBLICATIONS CHECK	R			R			
2		MISSION PLANNING	R	R	R	R	R	R	R
3		BRIEFING (if applicable)	R	R	R	R	R	R	R
4		PRE-TAKEOFF	R	R	R	R			R
5		TAKEOFF	R						
6		FORMATION TAKEOFF							
7		DEPARTURE	R						
8		LEVEL OFF	R						
9		CRUISE/NAVIGATION	R			R			
10		FORMATION							
11		IN-FLIGHT CHECKS	R	R	R	R	R	R	
12		FUEL MANAGEMENT	R	R	R				R
13		COMMUNICATION/IFF	R	R	R	R	R	R	R
14		CREW COORDINATION/CRM	R	R	R	R	R	R	R

15	1	AIRWORK/ADVANCED HANDLING/ TACTICAL MANEUVER	R						
16	2	UNUSUAL ATTITUDE RECOVERIES	R						
17		WEAPONS SYSTEM/BIT CHECKS							
18		AIR REFUELING							
19		DESCENT	R						
20		GO-AROUND							
21		TRAIL RECOVERY							
22		EMERGENCY TRAFFIC PATTERNS	R						
23		EMERGENCY APPROACH/LANDING	R						
24		VFR PATTERN/APPROACH	R						
25		FORMATION APPROACH/LANDING							
26		LANDING	R						
27		AFTER LANDING	R			R			
28		FLIGHT LEADERSHIP (if applicable)	R	R	R				R
29		DEBRIEFING/CRITIQUE	R	R	R	R	R	R	R
30		KNOWLEDGE	R	R	R	R	R	R	R
31	*	AIRMANSHIP	R	R	R	R	R	R	R
32	*	SAFETY	R	R	R	R	R	R	R
33	*	FLIGHT DISCIPLINE	R	R	R	R	R	R	R
34		INSTRUCTOR PERFORMANCE (if applicable)	R	R	R	R	R	R	R
35		INSTRUMENT INTERPRETATION							
36		RADAR SCOPE/SENSOR INTERPRE- TATION							
37 - 40		NOT USED							
INSTRUMENT									
41		HOLDING							
42		INSTRUMENT PENETRATION	R						
43		INSTRUMENT PATTERNS	R						
44		NON-PRECISION APPROACH	R						
45		MISSED APPROACH/CLIMB OUT	R						
46		CIRCLING/SIDE-STEP APPROACH							
47		INSTRUMENT CROSS-CHECK							
48	6	PRECISION APPROACH (QF-4 ONLY)	R						
49 - 50		NOT USED							

TACTICAL EMPLOYMENT									
A. GENERAL									
51		TACTICAL PLAN		R	R		R	R	
52		TACTICAL EXECUTION		R	R		R	R	
53		GCI/AWACS/CF INTERFACE							
54		RADIO TRANSMISSIONS		R	R				
55		VISUAL/RADAR LOOKOUT		R	R		R	R	
56		MUTUAL SUPPORT (if applicable)		R	R		R	R	
57		TACTICAL NAVIGATION		R			R		
58		INGRESS		R			R		
59		EGRESS		R			R		
60		COMBAT SEPARATION							
61		TIMING		R			R		
62		TRAINING RULES/ROE		R	R		R	R	
63	3	THREAT REACTIONS		R	R		R	R	
64		IN-FLIGHT REPORTS							
65		EA/EP/AAMD		R	R		R	R	
66		WEAPONS SYSTEM UTILIZATION		R	R	R	R	R	
67 - 70		NOT USED							
B. AIR-TO-AIR									
71	3	RADAR SEARCH/SORTING			R			R	
72	3	TACTICAL INTERCEPT/PATROL			R			R	
73	3	OFFENSIVE MANEUVERING			R				
74		DEFENSIVE/COUNTEROFFENSIVE MANEUVERING							
75	3	AIR-TO-AIR WEAPONS EMPLOY- MENT			R			R	
76 - 80		NOT USED							
C. AIR-TO-SURFACE									
81		TARGET ACQUISITION		R			R		
82	4	AIR-TO-GROUND WEAPONS EMPLOYMENT		R			R		
83		RANGE PROCEDURES							
84		THREAT IDENTIFICATION							
85 - 90		NOT USED							
D. QF-4 MCS FLIGHT									

91		AUTO TAKEOFF							
92		AIRWORK							
93		GO AROUND	R						
94		MCS PATTERN							
95		REMOTE APPROACH/LANDING	R						
96		SP/CONTROLLER COORDINATION	R						
97-100		NOT USED							

*Denotes Critical Area

NOTES:

1. Airwork/Advanced Handling/Tactical Maneuvering. This area is required for pilots receiving Instrument/ Qualification evaluations. Units will determine appropriate proficiency maneuvers for pilot experience levels. Examples are, but are not limited to:

- a. Aerobatics
- b. Confidence maneuvers
- c. Basic Fighter Maneuver (BFM)
- d. Advanced handling characteristics
- e. Formation (fingertip, tactical, trail)

2. Unusual Attitude Recoveries will be evaluated during EPEs, or if evaluated inflight, will be performed with an FE in the aircraft.

3. It may be impractical to evaluate these required items on certain FTU Instructor evaluations due to student syllabus constraints (e.g. BFM mission checks). Squadron commanders may approve these exceptions on a limited basis to validate instructor effectiveness. Document in the Additional Comments portion of the AF Form 8.

4. Hit/Miss

5. In order for a WSO to accomplish a single mission/qualification evaluation, the examinee will have to perform all required items.

6. Both a PAR and an ILS must be evaluated if equipment and facilities are available. However, if facilities or equipment are not available, the flight evaluation may be completed as long as one precision approach is flown.

3.3.8. Area 48--(P) Precision Approach:

3.3.8.1. **Q.** Performed procedures as directed and IAW applicable flight manual. Smooth and timely response to controller's instructions. Complied with decision height. Position would have permitted a safe landing. Maintained proper/briefed AOA. Maintained glide path with only minor deviations.

3.3.8.1.1. Airspeed +10/-5 kts

3.3.8.1.2. Heading within 5 degrees of controller's instructions (PAR)

3.3.8.1.3. Glide Slope/Azimuth within one dot (ILS)

3.3.8.2. **Q-** Performed procedures with minor deviations. Slow to respond to controller's instructions. Position would have permitted a safe landing. Improper glide path control. Slow to correct to proper/briefed AOA. Initiated appropriate action at Decision Height +/- 50 feet.

3.3.8.2.1. Airspeed +15/-10 kts

3.3.8.2.2. Heading within 10 degrees of controller's instructions (PAR)

3.3.8.2.3. Glide Slope within one dot low/two dots high (ILS)

3.3.8.2.4. Azimuth within two dots (ILS)

3.3.8.3. **U.** Performed procedures with major deviations. Erratic corrections. Did not respond to controller's instructions. Erratic glide path control. Did not comply with decision height and/or position would not have permitted a safe landing.

3.3.9. **Areas 49 - 50.** Not used.